

43. The method of claim 42, wherein conditions are selected which produce RNA expression profiles most closely approximating late-stage embryo profiles.
44. The method of claim 42, wherein the culture conditions are altered by operatively linking one or more stage-specific embryo promoter(s) to one or more sense or antisense nucleic acid molecules.
45. The method of claim 42, wherein the culture conditions are altered by operatively linking one more stage-specific embryo promoter(s) selected from SEQ ID NOS: 328-334 to one or more sense or antisense nucleic acid molecules.
46. The method of claim 42, wherein the change in expression profiles is correlated by a relational database.
47. A recombinant nucleic acid molecule encoding a product during embryo development comprising:
- a) a first nucleic acid sequence which is the LP2-3 promoter; and
  - b) a second nucleic acid sequence encoding a product, wherein the first nucleic acid is operatively linked to the second nucleic acid molecule whereby its expression is directed by the promoter sequence.
48. The recombinant nucleic acid molecule of claim 47 wherein the second nucleic acid sequence encodes for GFP, or a variant of GFP.
49. The recombinant nucleic acid molecule of claim 48 wherein the second nucleic acid sequence is linked to one or more additional nucleic acid molecules.
50. The recombinant nucleic acid molecule of claim 49 wherein the additional molecule encodes a protein product normally expressed by a developing embryo at a known stage.

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51. The recombinant nucleic acid molecule of claim 47 wherein the second nucleic acid sequence encodes an embryo-derived molecule.
52. The recombinant nucleic acid molecule of claim 51 embryo-derived molecule is stage-specific.
53. A plant cell comprising the recombinant nucleic acid molecule of claim 47.
54. A method for producing a protein product during embryo development comprising:
  - a) operatively linking one more stage-specific embryo promoter(s) to one or more nucleic acid molecules that encode a protein product,
  - b) delivering construct to developing embryos.
55. The method of claim 54 wherein the operatively linked nucleic acid molecule is a reporter or indicator gene.
56. The method of claim 54 wherein the operatively linked nucleic acid molecule is GFP, or a variant of GFP
57. The method of claim 54 wherein at least one stage-specific promoter is selected from SEQ ID NOS: 328-334.
58. A method for staging embryos comprising:
  - a) providing one or more stage-specific embryo promoter(s) operatively linked to one or more nucleic acid molecules that encode a protein product to developing embryos,
  - b) monitoring expression of the protein product as the embryo matures through stage in which promoter functions.

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59. The method of claim 58 wherein the operatively linked nucleic acid molecule is a reporter or indicator gene.
60. The method of claim 58 wherein the operatively linked nucleic acid molecule is GFP, or a variant of GFP.
61. The method of claim 58 wherein at least one stage-specific promoter is selected from SEQ ID NOS: 328-334.

FOOTNOTES

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